ABSTRACT OF THE DISCLOSURE

New and improved scanning device and corresponding method that include and involve a movable stage on which a specimen is positioned, irradiation means which irradiates an electron beam onto an irradiation region of the specimen, secondary beam detection means used in generating a picture of the irradiation region by detecting a secondary beam which consists of at least one of secondary electrons or reflected electrons from the irradiation region of the electron beam, an imaging electron optical system which causes imaging of the secondary beam on a detection surface of the secondary beam detection means, and which is arranged between the specimen and the secondary beam detection means. The secondary beam detection means is equipped with a fluorescent unit which is arranged on the detection surface, and which converts the secondary beam into light, and one-dimensional line sensors which have a structure arrayed in two dimensions forming electric charge by photoelectric conversion, an array imaging element which continuously adds up the electric charge of the accumulated image in a predetermined line of the line sensors, and the electric charge of the line of the image which moves accompanying the movement of the stage, and a two-dimensional imaging element which emits electric charge by means of photoelectric conversion. The scanning device and corresponding method further include and involve changeover means for selectively irradiating the light converted by means of the fluorescent unit to an imaging element which is either one of the array imaging elements and the two-dimensional imaging element.